

=> d his

(FILE 'HOME' ENTERED AT 17:39:52 ON 22 SEP 2005)

FILE 'CA' ENTERED AT 17:40:00 ON 22 SEP 2005

E ADAMY S/AU

L1 3 S E4-7 AND 1994/PY  
L2 6988 S (CONTOUR OR(3 OR THREE) (2W)DIMENSION?) (7A) (PLOT? OR DIAGRAM OR  
REPRESENT? OR DISPLAY OR GRAPH?)  
L3 1179 S L2 AND(PHASE OR W O OR O W OR EMULSI? OR MICROEMULS? OR (WATER OR  
H2O) (1A)OIL OR SUSPENSION)  
L4 117 S L3 AND(AUTOMAT? OR COMPUTER OR MICROPROCESSOR)  
L5 111 S L4 NOT(COMPRESS? OR MICROPORE OR ORIFICE OR ION CHROMATOG? OR  
CHEMICAL FORMULA OR TOMOGRAPHY OR WAVE FORM OR COMBINATORI?)  
L6 81 S L5 NOT(VIRUS OR REFRACT? OR DIGEST? OR MINING OR COLONY OR HOLOGR?  
OR ARTS OR PREDICT? OR DIMER)  
L7 72 S L6 NOT(VOID OR POLYANIL? OR YEAST OR PROTEIN OR SOIL OR CYTOPLASM  
OR ENZYM? OR LIGAND OR POCKET OR INTERATOM? OR CEMENT)  
L8 56 S L7 NOT(DIFFRACT? OR BIOINF? OR ANNULAR OR POSTING OR CHANNEL OR  
FLAME OR ESTROGE? OR ANNEAL? OR PLANT OR AMYLOID)  
L9 61 S L4 NOT L8  
L10 1 S L9 AND STYRENE  
L11 57 S L8,L10

=> d bib,ab 1-3 11

L1 ANSWER 2 OF 3 CA COPYRIGHT 2005 ACS on STN  
AN 121:303582 CA  
TI Effects of cosurfactant and oil chain length on phase behavior and  
solubilization in alcohol and glycol ether microemulsions  
AU **Adamy, S. T.**  
CS Technology Center, Colgate-Palmolive Company, Piscataway, NJ, 08855, USA  
SO Journal of Dispersion Science and Technology (1994), 15(6), 727-48  
AB The phase behavior and oil solubilization capacities of a series of  
model microemulsion systems have been studied. Phase behavior was  
studied in systems composed of NaCl brine, sodium dodecyl sulfate, and  
either 1-butanol, 1-pentanol, ethylene glycol monobutyl ether,  
diethylene glycol monobutyl ether, ethylene glycol monohexyl ether, or  
diethylene glycol monohexyl ether. Longer-chained cosurfactant systems  
exhibit isotropic behavior over smaller compositional ranges. Whereas  
the ethylene glycol monohexyl ether system possessed two sep. isotropic  
microemulsion-type regions, all other systems possessed connected  
isotropic regions. The one-phase regions in the 1-pentanol system,  
however, are connected by a narrow channel. Increasing the degree of  
amphiphilicity in the cosurfactant tends to increase the occurrence of  
liq. crystal phases. The effects of changing the cosurfactant structure  
and the oil chain length in oil solubilization were also analyzed. We  
introduce the method of presenting solubilization data in the form of  
contour plots, and demonstrate the utility of these plots for  
understanding solubilization. It was generally found in both alc. and  
glycol ether systems that lengthening the cosurfactant chain or  
shortening the oil chain tended to increase solubilization and drive the  
systems to be more dependent on the amt. of cosurfactant and less on the  
amt. of surfactant. In the ethylene glycol monohexyl ether system, liq.  
crystals could be formed when octane or dodecane was solubilized and

high concns. of amphiphiles were present, but not when hexadecane was solubilized. The trends in solubilization were able to be qual. described by Winsor's R ratio anal., which may provide a means of performing direct calcns. to predict behavior in these systems.

=> d bib,ab 1-57 115

- L11 ANSWER 32 OF 57 CA COPYRIGHT 2005 ACS on STN  
AN 112:166184 CA  
TI **Phase** equilibrium calculations and **three-dimensional computer graphics representation**  
AU Nitta, Tomoshige; Ikeda, Kazufumi; Katayama, Takashi  
CS Fac. Eng. Sci., Osaka Univ., Osaka, 560, Japan  
SO Fluid Phase Equilibria (1989); 53, 105-12  
AB An important role of global stability anal. is emphasized for **phase** equil. calcns. to det. the thermodynamically most stable soln. An algorithm used in this work is to find first an outside soln. in the Gibbs energy surface and then to search any inside solns. by means of the bisection search principle. The global stability anal. should also be applied to mixt. crit. points calcd. from the conventional crit. condition. Typical **phase** diagrams are calcd. for binary mixts. including three **phases** (gas, liq. and solid) by using the Soave-Redlich-Kwong equation of state. **Three-dimensional** pressure-temp.-compn. (pTx) **phase diagrams** were displayed on a personal **computer** with functions of rotation, zoom, enlargement and projections on the pT, px and Tx axes.
- L11 ANSWER 47 OF 57 CA COPYRIGHT 2005 ACS on STN  
AN 98:34972 CA  
TI Mathematical treatment of the **emulsification** of benzene and **styrene** in aqueous hexadecyltrimethylammonium bromide-cetyl alcohol mixtures  
AU Chou, Y. J.; El-Aasser, M. S.; Vanderhoff, J. W.  
CS Emulsion Polymers Inst., Lehigh Univ., Bethlehem, PA, 18015, USA  
SO ACS Symposium Series (1982), 197(Comput. Appl. Polym. Sci.), 399-425  
AB **styrene** [100-42-5] Or benzene [71-43-2] mini-**emulsions** of 0.1-0.3  $\mu$  diam. were prepd. at 63° using a mixt. of aq. hexadecyltrimethylammonium bromide (I) [57-09-0] and cetyl alc. [36653-82-4]. The most stable **emulsions**, formed at 1:3-1:1 molar ratios, contained cryst., rodlike particles of I and II, 1-2  $\mu$  in length and 0.1-0.2  $\mu$  in diam. Conductometric titrn. of these optimum systems with **styrene** or benzene gave a near-linear leg descending to an inflection point followed by another near-linear leg ascending to a second inflection point and a near-const. or slowly-decreasing leg thereafter. The descending leg was interpreted as solubilization of the oil in micelles or cryst. complex, the ascending leg as **emulsification** to form tiny droplets which grew by coalescence and diffusion, and the near-const. or slowly decreasing leg to droplet growth by diffusion. The conductometric titrn. curves were expressed by an exponential step function in terms of the initial conductance, the conductances at both inflection points, a solubilization const., an **emulsification** const., and a droplet growth const. Iterative **computer** soln. of this math. model gave a reasonable fit of the different exptl. titrn. curves, and the calcd. parameters were correlated with the I and II concns. to give the distributions of

the **emulsifier** as solute **emulsifier**, micellar **emulsifier**, and **emulsifier** in the cryst. complex. The correlation of **emulsion** stability with the presence of the cryst., rodlike particles allowed a prediction of **emulsion** stability. Finally, a **three-dimensional plot** of conductance as a function of added benzene and II concn. at a given I concn. was calcd. by **computer** curve-fitting and used to visualize the conductance surface at any desired angle.

=> log y

STN INTERNATIONAL LOGOFF AT 18:12:38 ON 22 SEP 2005

=> d his

(FILE 'HOME' ENTERED AT 16:22:09 ON 22 SEP 2005)

FILE 'CA' ENTERED AT 16:22:33 ON 22 SEP 2005

L1 4895 S (3 OR THREE) (2W) DIMENSION? (7A) (PLOT? OR DIAGRAM OR CONTOUR OR REPRESENT? OR DISPLAY OR GRAPH?)  
L2 359 S L1 (10A) (AUTOMAT? OR COMPUTER)  
L3 33 S L2 AND (PHASE OR W O OR O W OR EMULSI? OR MICROEMULS? OR (WATER OR H2O) (1A) OIL)  
L4 228 S L2 AND GRAPHIC?  
L5 74 S L4 AND (EXPERIMENT OR DATA)  
L6 104 S L3, L5  
L7 94 S L6 NOT (COMPRESS? OR MICROPORE OR ORIFICE OR ION CHROMATOG? OR CHEMICAL FORMULA OR TOMOGRAPHY OR WAVE FORM OR COMBINATORI?)  
L8 71 S L7 NOT (VIRUS OR REFRACT? OR DIGEST? OR MINING OR COLONY OR HOLOGR? OR ARTS OR PREDICT? OR DIMER)  
L9 43 S L8 NOT (VOID OR POLYANIL? OR YEAST OR PROTEIN OR SOIL OR CYTOPLASM OR ENZYM? OR LIGAND OR POCKET OR INTERATOM? OR CEMENT)  
L10 32 S L9 NOT (DIFFRACT? OR BIOINF? OR ANNULAR OR POSTING OR CHANNEL OR FLAME OR ESTROGE? OR ANNEAL? OR PLANT OR AMYLOID)

=> d l10 bib, ab 1-32

L10 ANSWER 13 OF 32 CA COPYRIGHT 2005 ACS on STN  
AN 115:44115 CA  
TI Investigation of emulgation and **emulsion** stability of thiocarbamate herbicides  
AU Dombay, Zs.; Mogyorodi, F.  
CS North Hung. Chem. Works, Sajobabony, H-3792, Hung.  
SO Proc. Conf. Colloid Chem. Mem. Ervin Wolfram, 5th (1990), Meeting Date 1988, 106-9. Editor(s): Kiss, E.; Pinter, J. Publisher: Lorand Eotvos Univ., Budapest, Hung.  
AB **Emulsification** and **emulsion** stability (persistence in time) of thiocarbamate herbicides (ethiolate, EPTC, cycloate and butylate) were investigated through photometric measurement of turbidity. Influence of various parameters was evaluated. Investigations included combined herbicidal formulations. Results were analyzed and **represented** by **computer** in **three-dimensional diagrams**.

L10 ANSWER 15 OF 32 CA COPYRIGHT 2005 ACS on STN  
AN 114:120915 CA  
TI PlotIT - **graphics** and statistics in 3 dimensions

AU Schweim, Harald; Nagel, Klaus  
 CS Inst. Pharm. Chem., Univ. Hamburg, Hamburg, D-2000/13, Germany  
 SO Pharmazie in Unserer Zeit (1991), 20(1), 37-41  
 LA German  
 AB The personal computer version (1.5) of the **data** processing, statistical evaluation, and **data graphical** display program PlotIT, was critically tested for its applicability for chem.-related **data** processing and representation on an IBM-compatible with a 80386 processor. The program, which is either command- or menu-driven and which enables the 3-dimensional representation of histogram or X/Y/Z plots ("fish net" plots) in addn. to conventional X/Y plots, histograms, or pie charts, performed well; 1 or 2 minor errors were apparent (e.g. default parameters which could lead to a system crash). These are described, together with the various functions of the program. The program requires hardware corresponding to its high std.; this, coupled with its complexity which requires a certain amt. of familiarization probably makes it more suitable for large, rather than small, labs.

L10 ANSWER 20 OF 32 CA COPYRIGHT 2005 ACS on STN  
 AN 106:127893 CA  
 TI Modular software-controlled electrochemical system  
 AU Hagan, D.; Spivey, J.; Niculescu, V. A.  
 CS Virginia Commonw. Univ., Richmond, VA, 23284-0001, USA  
 SO Review of Scientific Instruments (1987), 58(3), 468-74  
 AB A modular microcomputer-controlled 3-electrode potentiostat configured with **graphics** is presented. The system was designed for metallic surface characterization and is capable of performing in different modes of operation including single sweep voltammetry, cyclic voltammetry, and chronoamperometry. An integrated and flexible software system for control, **data** taking, **data** storage, and transfer is described. **Data** anal. software for the IBM-PC **computer** including 2- and 3-dimensional **plotting** as well as menu-driven theor. modeling, simulation, and curve fitting was developed.

L10 ANSWER 24 OF 32 CA COPYRIGHT 2005 ACS on STN  
 AN 103:148098 CA  
 TI **Three-dimensional** PTx **phase diagrams** through interactive **computer graphics**  
 AU Charos, Georgios N.; Clancy, Paulette; Gubbins, Keith E.; Naik, Chandrashekhar D.  
 CS Sch. Chem. Eng., Cornell Univ., Ithaca, NY, 14853, USA  
 SO Fluid Phase Equilibria (1985), 23(1), 59-78  
 AB Interactive computer graphic techniques were developed for the display of binary mixt. **phase** diagrams. The diagrams are defined in temp.-pressure-compn. space, and are pictured as wireframe objects with depth perception in order to provide a three-dimensional effect. The displays used were vector refresh workstations whose transformation hardware allows real-time rotation, rescaling, and translation of the diagrams, while software allows the extn. of const. property Px, Tx, PT, and x-y plots. The equil. surfaces and the crit. lines were calcd. by using the Redlich-Kwong equation of state and its Soave modification.

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